Met Office tropical storms forecast success

18 December 2007

The Met Office's first-ever seasonal tropical storms forecast provided some of the best guidance in 2007, demonstrating greater accuracy than predictions from other forecasting centres.

The unique forecast uses global climate models coupled with ocean temperature predictions to forecast tropical storm activity and builds on the success of trials during the previous two years.

In June, the Met Office issued the forecast for 10 named tropical storms in the Atlantic between July and November. The actual number of named storms recorded during that period was 12.

Two of those storms, hurricanes Dean and Felix, were intense storms but overall it was a quiet year. Only two of the last 12 Atlantic tropical storm seasons have recorded lower activity than 2007.

Paul Nunn, Lloyd's Head of Exposure Management said: "Lloyd's were delighted to host the launch of the Met Office 2007 hurricane prediction method in June. We believe that having a variety of forecasting methods is valuable to the insurance market and we find the Met Office's innovative dynamical modelling particularly exciting as it incorporates our understanding of the laws of physics into the process."

The Met Office is unique in providing seasonal tropical storm predictions together with short-range track and landfall projections of individual storms. These forecasts ensure consistent and accurate advice on the possible impacts and risks to businesses ranging from financial markets, insurers and the oil industry.

This year has been the most successful year in forecasting the short-term track of tropical storms. Since 1996, the Met Office has been predicting the paths of specific storms and this year the Met Office has achieved its lowest recorded track error since the forecasts began.

The prospect of a warmer climate is likely to lead to an increase of intense tropical storms with higher wind speeds and heavier rain. Principal Climate Change Consultant, Matt Huddleston said: "By the 2080s, tropical cyclone winds could be 6% stronger, which is the difference between a Category 4 and a Category 5 storm. Hurricanes represent one of the biggest financial risks to the UK's markets. These new forecasting techniques couldn't have come at a more critical time"

More about tropical cyclones

Notes

- The Met Office Public Weather Service is supporting a basic tropical storm frequency forecast for the Atlantic's June-November season.
- Tropical storms represent significant risk to the insurance, energy and finance markets. In 2005, Lloyd's estimated its losses to be £2.9 billion as a result of the three biggest hurricanes in the Atlantic season alone. The impact of Hurricane Katrina on oil and gas production was hugely significant for UK and global markets.
- The Met Office's short-range weather model gives some of the best advice on hurricane track and landfall. It forecast the landfall of Katrina a full 12 hours ahead of any other model and track errors have decreased year on year.

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